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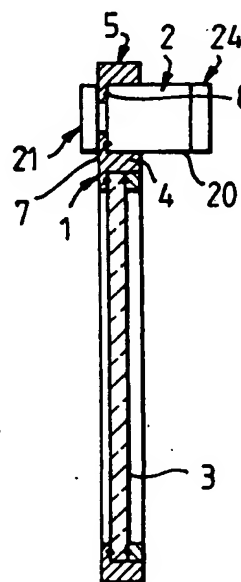
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**Ventilation unit for window frames or door frames.**

A window or door frame 5 has a horizontal transom 4 above a glazing panel 3. A fan 2 or ventilation grille is mounted in an opening 6 in the frame above the transom 4. The opening 6 has a rebate 7 extending around its inner periphery. The fan 2 is held against one side of the rebate 7 and is clamped in position by a plate 21 held against the other side of the rebate by screws 22 extending between the fan and the plate.

**Fig.2.**



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This invention relates to assemblies of the kind having a dividing member and a glazing panel within the frame to one side of the dividing member.

Window or door frames can include a vent unit such as a grille or a fan. This enables ventilation to take place with a fixed window or while the window or door is closed. One advantage of this is that it enables a high degree of security. It can also enable heat recovery apparatus to be used. Because a significant cost of an opening window frame is in its locking and opening mechanism, it can be cheaper to use a fixed window incorporating a fan or other vent.

It is an object of the present invention to provide a window or door assembly in which an auxiliary unit, such as a ventilation unit, can be mounted readily.

According to the present invention there is provided an assembly of the above-specified kind, characterised in that the other side of the dividing member defines an opening in which an auxiliary unit is received, that a rebate extends around the inner periphery of the opening, and that a member secures the auxiliary unit against an inside surface of the rebate.

The member securing the auxiliary unit against the inside surface of the rebate may include a plate that bears against the outside of the rebate, the plate being secured to the auxiliary unit. The plate may be secured to the auxiliary unit by means of screws extending between the auxiliary unit and the plate. The dividing member is preferably a horizontally-extending transom, the glazing panel preferably being located below the transom and the auxiliary unit being located above the transom. The auxiliary unit may include an electric fan or be a ventilation grille.

Two different window assemblies, in accordance with the present invention, will now be described, by way of example, with reference to the accompanying drawings, in which:

- Figure 1 is a side elevation view of an assembly from the inside;
- Figure 2 is a sectional side elevation along the vertical line II - II of Figure 1;
- Figure 3 is a sectional view along the horizontal line III - III of Figure 1;
- Figure 4 is an exploded perspective view of the assembly;
- Figure 5 is a side elevation view of a second assembly;
- Figure 6 is a sectional side elevation along the vertical line VI - VI of Figure 5;
- Figure 7 is a sectional view along the horizontal line VII - VII of Figure 5; and
- Figure 8 is an exploded perspective view of the assembly of Figures 5 to 7.

With reference first to Figures 1 to 4, there is shown an assembly including a fixed window frame 1 and an auxiliary unit in the form of a fan unit 2. The window frame 1 may be of any conventional material such as wood, aluminium or UPVC. Glass double-glazing panels 3 are installed in the lower part of the window, below a dividing member in the form of a transom 4 extending horizontally across the frame, towards its upper end. The gap between the transom 4 and the upper horizontal side 5 of the frame 1 defines an opening 6 within which the fan unit 2 is received. A rebate 7, about 2cm wide, extends around the inner periphery of the opening 6 at its outer side, that is, to the left of Figures 2 and 4. A sealing bead 8, such as of a resilient plastics or rubber material, extends around the rebate 7 on its internal, vertical surface.

The fan unit 2 is contained in a rectangular housing 20 having the same cross-section as the opening 6 but having a depth that is 2-3 times that of the window frame. The fan unit 2 may contain any conventional electric fan and control unit (not shown). The fan unit 2 is pushed onto the sealing bead 8 on the rebate 7, which limits its insertion. The fan unit 2 is held in the frame 1 by clamping onto the rebate 7 from opposite sides. This is achieved by means of an outer grille plate 21, which is of the same cross sectional size as the fan unit 2 so that it is larger than the opening within the rebate 7. Four screws 22 extend through respective holes in the fan unit 2 and into threaded holes 23 in the grille plate 21. When these screws 22 are tightened, the fan unit 2 and the outer grille 21 are securely held in place. An inner grille plate 24 is fastened onto the internal face of the fan unit 2 by two screws 25, to enclose its mechanism.

It can be seen that this arrangement enables the fan unit 2 to be held securely and sealed in the window frame 1 without the need to make any fixing holes or permanently attach any fixing components to the frame. The window frame 1 can, moreover, be made of conventional components. The fan unit 2 can be installed readily and can be readily removed for maintenance or replacement.

The assembly need not have a fixed glazing panel but could have an opening light, especially where security is not a problem, such as in first floor and higher installations. This makes removal of the fan unit 2 and outer grille plate 21 easier from inside.

In the same way, it is possible to mount a ventilation grille unit in a window or door frame, as shown in Figures 5 to 8. The window frame 1' is identical to that used in the arrangement of Figures 1 to 4. An outer grille plate 21', similar to the grille plate 21, is clamped onto the outside of the rebate 7' by two screws 22' extending through holes in an inner grille unit 24'. The grille unit 24' preferably

includes a movable shutter or the like (not shown), linked to a manually-rotatable knob 25' by which the position of the shutter can be controlled to alter air flow through the grille unit from a fully open to fully closed or trickle flow position. As shown in Figures 6 and 7, the grille unit 24' can be fully contained within the depth of the frame, internally of the rebate 7'.

Instead of a ventilation unit, that is, the fan 2 or grille 24', alternative units, such as, for example, lamps, clocks, security systems, proximity detectors and the like could be mounted in the same way in a window or door frame.

The frame need not have a horizontal transom but could, instead, have a vertical dividing member in the form of a mullion. In this arrangement, the glazing panel would be secured on one side of the mullion and the fan unit or other auxiliary unit would be located on the other side of the mullion.

The present invention enables window or door frames to be used flexibly for various different applications.

#### Claims

1. An assembly including a glazing frame (1) having a dividing member (4) and a glazing panel (3, 3') within the frame to one side of the dividing member, characterised in that the other side of the dividing member defines an opening (6) in which an auxiliary unit (2, 24') is received, that a rebate (7) extends around the inner periphery of the opening, and that a member (21, 21') secures the auxiliary unit (2, 24') against an inside surface of the rebate.
2. An assembly according to Claim 1, characterised in that the member securing the auxiliary unit against the inside surface of the rebate (7) includes a plate (21, 21') that bears against the outside of the rebate, and that the plate is secured to the auxiliary unit (2, 24').
3. An assembly according to Claim 2, characterised in that the plate (21, 21') is secured to the auxiliary unit (2, 24') by means of screws (22, 22') extending between the auxiliary unit (2, 24') and the plate (21, 21').
4. An assembly according to any one of the preceding claims, characterised in that the dividing member is a horizontally-extending transom (4).
5. An assembly according to Claim 4, characterised in that the glazing panel (3) is located below the transom (4) and the auxiliary unit (2, 24') is located above the transom (4).
6. An assembly according to any one of the preceding claims, characterised in that the auxiliary unit includes an electric fan (2).
7. An assembly according to any one of Claims 1 to 5, characterised in that the auxiliary unit is a ventilation grill unit (24').

Fig.1.

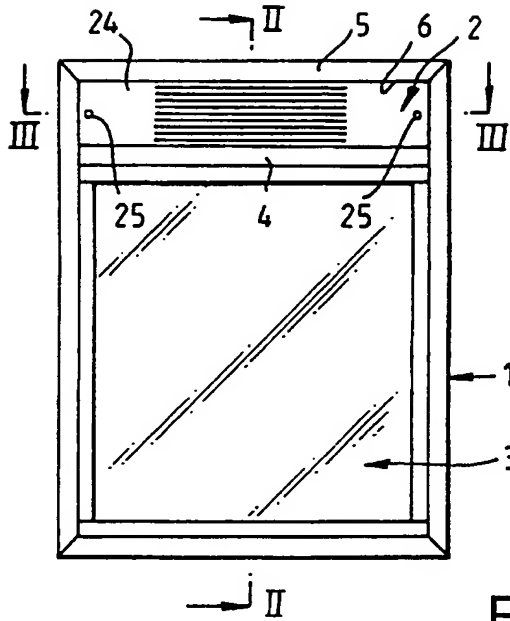


Fig.2.

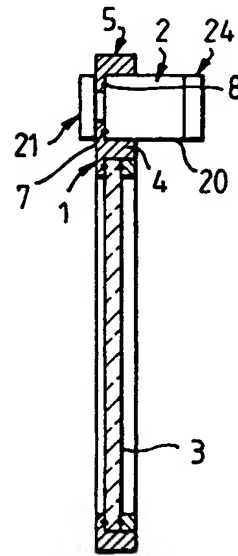


Fig.3.

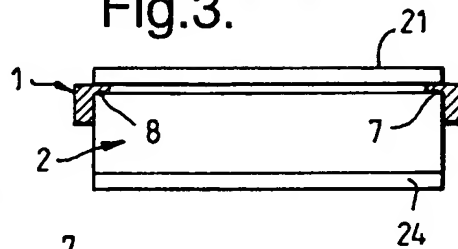


Fig.4.

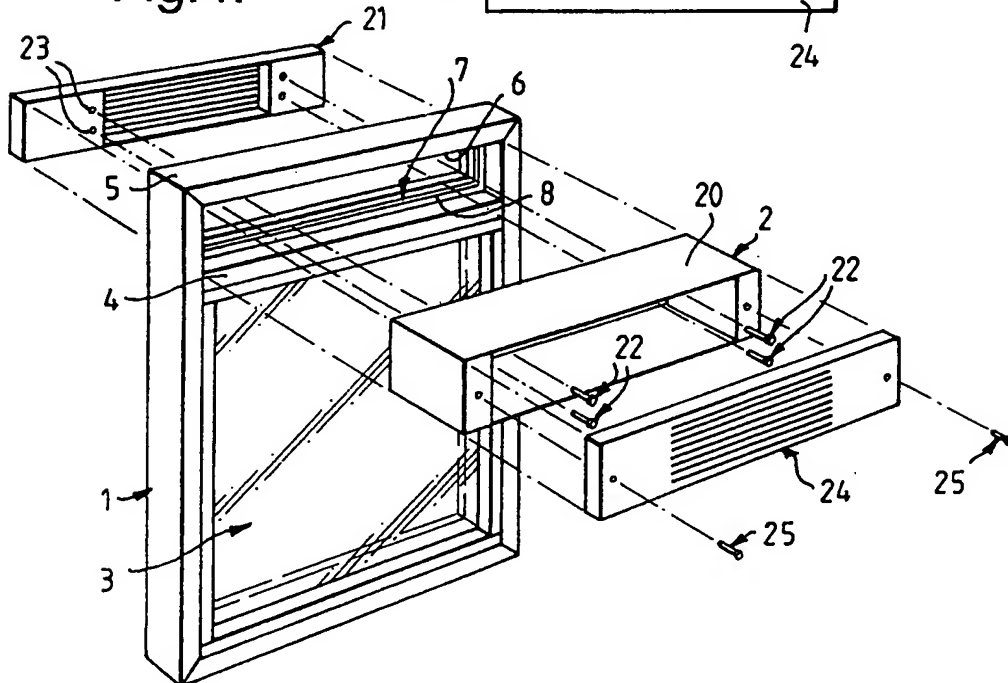


Fig.5.

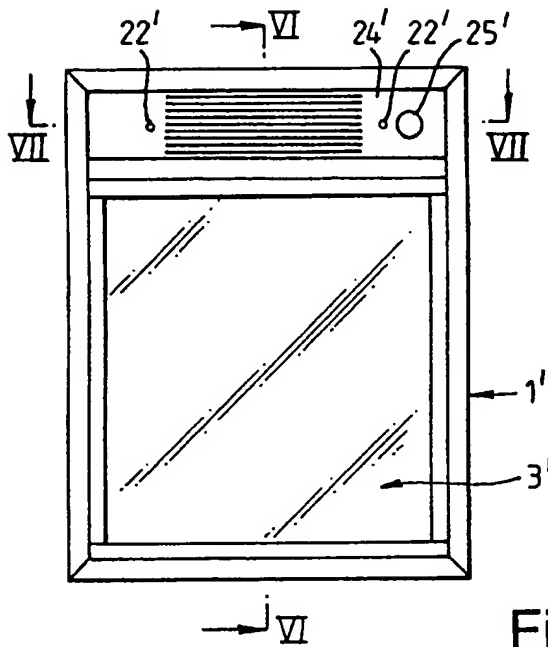


Fig.6.

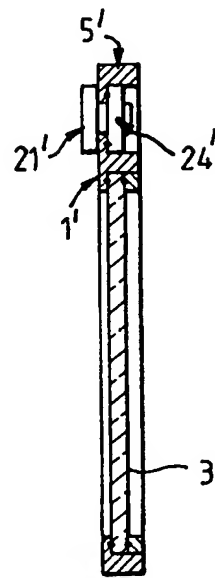


Fig.7.

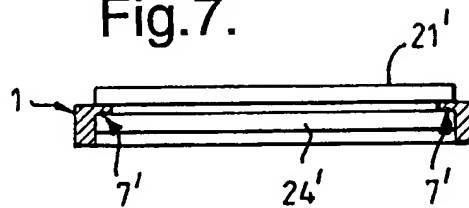


Fig.8.

